

L 7029-66 EWT(d)/BWP(v)/BWP(k)/BWP(h)/BWP(l)

ACC NR: AP5026827

SOURCE CODE: UR/0286/65/000/017/0112/0112

AUTHOR: Dubinenko, A. F.; Nadel', M. S.; Tenin, I. A. 27
23

ORG: none

TITLE: A device for auxiliary fastening of flexible components. Class 49, No. 174503 [announced by the "SKBARS" Special Design Office at the Radial Drilling Machine Plant (Spetsial'noye konstruktorskoye byuro "SKBARS" pri Zavode radial-no-sverlil'nykh stankov)]

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 17, 1965, 112

TOPIC TAGS: machine tool industry, mechanical fastener, machine jig 14

ABSTRACT: This Author's Certificate introduces: 1. A device for auxiliary fastening of flexible components without transmitting the forces from the fastener to the article at points subject to deformation. The device contains movable face brackets which hold the component stationary, and means for securing the brackets. The unit is designed for immobilizing the component to be machined in two mutually perpendicular planes. The brackets for immobilizing the component in one plane are made in the form of coaxial rods which are moved in opposing directions by spring-return posts. A cam mounted in the housing is used for simultaneously immobilizing the component in the other plane. This device is made in the form of a cylindrical rod which can be rotated and moved along its axis. These cams have two wipers with con-

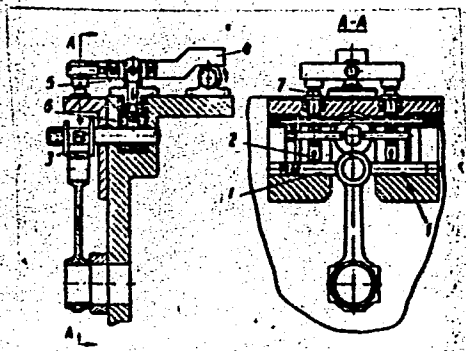
Card 1/2

UDC: 621.229.382

2

L 7029-66

ACC NR: AP5026827



vergent bearing surfaces. 2 A modification of this device in which the unit for fastening the brackets and cam is made in the form of a two-armed lever. The mid support point of the lever is mounted on a base which interacts with a movable spring-supported sleeve surrounding the cam rod. One end of the lever is a driver, and the other moves the spring-return rods which immobilize the brackets.

Fig. 1. 1--brackets; 2--spring-return posts; 3--cam; 4--two-armed lever; 5--base (rod); 6--movable sleeve; 7--spring-return rods

SUB CODE: IE/

SUBM DATE: 06Dec63/

ORIG REF: 000/

OTH REF: 000

BC
Card 2/2

NADELICHEVA, V.A.

Sputum examination in laboratory diagnosis. Suvrem. med., Sofia 9 no.8:
83-88 1958.

(SPUTUM,
diag. exam. (Bul))

NADEL'MAN, L. I.

Nadel'man, L. I. - "A Comparison of the Aerodynamic Characteristics of Flat Immovable Gratings with the Characteristics of Cross-Sections of Rotor Blades of an Axial Compressor, Based on Experimental Data." Min Heavy Machine Building USSR. Central Sci Res Boiler and Turbine Inst imeni I. I. Polzunov. Leningrad, 1956 (Dissertation for the Degree of Candidate in Technical Sciences).

So: Knizhnaya Letopis', No. 10, 1956, pp 116-127

AUTHOR: Nadel'man, L.I., Engineer.

SOV/96-58-6-9/24

TITLE: On the use of dimensionless relationships in working out the test results of axial compressor stages. (O primeneni bezrazmernykh sootnosheniy pri obrabotke dannykh ispytaniy stupeni oseвого kompressora.)

PERIODICAL: Teploenergetika, 1958, No.6. pp. 50-52 (USSR)

ABSTRACT: Tests on axial compressor stages are usually made in order to determine the overall stage characteristics of head and efficiency as functions of discharge rate, but if measurements are also made of the pressure and velocity fields over the height of the blades, much more information can be derived from the test data. The first requirement is to determine the experimental velocity triangles, but a great deal of work would be required to determine them for each throttling curve. Work is saved by reducing the initial test data to dimensionless form. The dimensionless triangle of velocities and its application to the working out of test data, is then considered. It is shown that for a given output resistance the triangles corresponding to different velocities are similar. It is shown also that the dimensionless triangle includes the three main characteristics of flow in the rotating blading: the flow factor, the theoretical head and the reaction. To obtain all the flow characteristics it suffices to know the minimum values, namely, the vectors of absolute velocities before and after the impeller.

Card 1/2

SOV/96-58-6-9/24

On the use of dimensionless relationships in working out the test results of axial compressor stages.

Bernouilli's equation is given in dimensionless form. Tests have shown that for Mach numbers less than 0.5 the dimensionless total and static pressures for different impeller speeds are practically the same (see fig.2.). The distribution of dimensionless pressure over the height of the blades for seven values of system resistance are given in fig.3. for an impeller with about 70% reaction. The extent to which experimental points may depart from the curve constructed from mean values will be seen from fig.4, and is attributed to errors of measurement. A formula is given by which the coefficient of absolute velocity may be calculated and curves of this parameter are given in fig.5. for an impeller with about 55% reaction. Fig.6. shows the distribution of the angles of absolute inlet velocity for a number of values of system resistance. The dimensionless output factors may be used to check on the tests. If the total flow at any section is calculated and is compared with the flow measured with a flowmeter, agreement should be within 2 - 3% if the tests have been made correctly. There are 6 figures and no literature references.

ASSOCIATION: Central Boiler Turbine Institute. (Tsentral'nyy kotloturbinnyy institut)

Card 2/2

1. Axial flow compressors--Performance 2. Axial flow compressors--Test methods 3. Gas flow--Velocity 4. Gas flow--Mathematical analysis 5. Data--Analysis

NADEL'MAN, L.I., inzh.

Blades of axial-flow blowers from plastic materials.
Energomashinostroenie 9 no.10:38-40 0 '63. (MIRA 16:10)

RODIONOVA, K.F.; IL'INSKAYA, V.V.; NADEL'SHTEYN, I.V.

Comparative studies of methane-naphthene hydrocarbons from crude oils and disseminated bitumen substances. Geol.nefti i gaza 6 no.8:52-56 Ag '62. (MIRA 15:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologorazvedochnyy neftyanoy institut, Moskva.

(Hydrocarbons)

RODIONOVA, K.F.; IL'INSKAYA, V.V.; NADEL'SHTSEYN, I.V.

Characteristics of saturated hydrocarbons from the oils of
some crude petroleum and disseminated bitumens. Trudy

VNIGNI no.33:181-211 '62.

(MIRA 18:12)

NADEL'SON, F.M. (Berezovskiy)

Effect of renal denervation on its basic secretory functions;
excretion of water, sodium chloride, and urea. Pat.fiziol. i
eksper.terap. 2 no.1:53-54 Jan '58. (MIRA 12:9)

1. Iz kafedry patologicheskoy fiziologii (zav. - prof. I.M.
Stribner) Odesskogo instituta usovershenstvovaniya vrachey.
(KIDNEYS, physiology,
eff. of denervation on excretory funct. (Rus))

NADL'SCN, F. E.

Cand Med Sci - (diss) "Effect of depuration of the kidney on its basic eliminatory functions. (Elimination of water, sodium chloride, and urea)." Perm', 1961. 16 pp; (Ministry of Public Health R. FSR, Perm' State Med Inst); 200 copies; free; (KL, 7-61 sup, 260

NADEL'SON, P.I.; KOMYAGINA, V.G.

Excretion of silicon dioxide from the body. Sbor. rab.
po sil. no.1:133-142 '56. (MLRA 10:2)

1. Berezovskaya opytanaya nauchno-issledovatel'skaya
stantsiya.

(SILICA) (LUNGS--DUST DISEASES)

NADEL'SON, R. G.

ZVEZDKIN, V. N. and NADEL'SON, R. G. Calculating Leakage Currents in Transformers
(Ob Izmerenii Tokov Utechki v Transformatorakh), pp. 32-34

The authors, analyzing many high-voltage laboratory experiments with transformer insulation, conclude that the leakage measurements do not present any advantage over the insulation resistance tests made with a megger. (Graphs and tables).

SO: ELEKTRICHESKIYE STANTSII, No. 12, Dec. 1952, Moscow (1614306)

KALANTAROV, A. V., Eng.; NADEL'SON, R. G.

Bakelite

Relation of the dielectric properties of bakelite insulation to temperature.
Elek. sta., 23, No. 6, 1952.

Monthly List of Russian Accessions, Library of Congress, October 1952 UNCLASSIFIED.

1. ZVEZKIN, V.N.; NADEL'SON, R.G.
2. USSR (600)
4. Electric Transformers
7. Effect of the properties of oil on the characteristics of transformer insulation,
Eng. V.N. Zvezdkin, R.G. Nadel'son, Elek.sta. 24 no. 3, 1953.
9. Monthly List of Russian Accessions, Library of Congress, APRIL 1953, Uncl.

ZVEZDKIN, V.N., inzhener; NADEL'SON, R.G., inzhener.

Testing the insulation of large transformers. Elektrichestvo
no.7:70-73 J1 '56. (MLBA 9:10)

1. Lenenergo.
(Insulating oils) (Electric transformers)

8622

9.2120

S/104/60/000/004/001/001
E194/E484

AUTHORS: Zvezdkin, V.I., Engineer, Izrayelit, G.B., Engineer,
Loytsyanskaya, M.G., Engineer and Nadel'son, R.G.,
Engineer

TITLE: The Influence of the Dielectric Properties of Transformer
Oil on the Electric Strength of Transformer Insulation

PERIODICAL: Elektricheskiye Stantsii, 1960, No.4, pp.60-64

TEXT: Study of the insulation of transformers in service shows
that the insulating properties often deteriorate quite quickly,
although the electric strength remains high the power factor
increases and the insulation resistance diminishes. As this has
been due to impaired characteristics of the oil, thermo-syphon
filters have been fitted to many transformers or the oil has been
changed. However, these are both temporary or inadequate
solutions and it was decided to study whether it was safe to leave
transformers in service with oil of poor dielectric properties.
Increase in the dielectric loss angle of transformer insulation
caused by deterioration in the electrical properties of the oil
causes additional heating of the insulation which could lead to

Card 1/5

86622

S/104/60/000/004/001/001
E194/E484

The Influence of the Dielectric Properties of Transformer Oil on
the Electric Strength of Transformer Insulation

breakdown. Normally dielectric losses in transformers are so small that they may be neglected in comparison with the iron and copper losses; however, these dielectric losses increase considerably as the power factor of the oil deteriorates in service. Calculations were made for a transformer of 100 MVA, 220/110/10 kV which showed that with new oil the losses of the solid dielectric were 5.22 kW and of the oil 0.763 kW, whilst with oil of $\tan \delta = 93\%$ the losses of the solid insulation were 10.6 kW and of the oil 54 kW. It is considered that losses of this magnitude are not dangerous in a transformer of this size particularly as most of them occur within the oil where heat transfer conditions are good. Deterioration of the electrical properties of the oil has no influence on the short term electric strength. However, impairment of the electrical properties of the oil is accompanied by increase in the permittivity and calculations are made on the assumption that the permittivity of the oil rises from 2.1 to 4.5 at 60°C. It is shown that whereas the voltage gradient in the oil

Card 2/5

8622

S/104/60/000/004/001/001

E194/E484

The Influence of the Dielectric Properties of Transformer Oil on the Electric Strength of Transformer Insulation

then diminishes from 38 to 35 kV/cm the gradient in the bakelite rises from 16.1 to 31.4 kV/cm. However, this is not considered to be dangerous. The increased stress in paper board is less because it is more highly impregnated with oil. Thus, the calculations reveal no special risk in allowing transformers with oil of high power factor or low resistivity to continue in service. Tests were made on various transformers filled alternatively with fresh and deteriorated oil, large power transformers could not be used for these tests but instrument transformers and a smaller power transformer were used. The values of breakdown voltage were determined for the case of thermal breakdown with the transformer insulation at a temperature not below 95°C. The temperature was maintained by the use of a special heated chamber. At 20°C, the properties of the used oil were $\tan \delta = 7\%$, resistivity 4.55×10^{11} ohm cm and at 80°C $\tan \delta = 90\%$, resistivity 3.2×10^{10} ohm cm, the corresponding values for fresh oil were: at 20°C, $\tan \delta = 0.1\%$, resistivity = 3.2×10^{14} ohm cm

Card 3/5

86622

S/104/60/000/004/001/001
E194/E484

The Influence of the Dielectric Properties of Transformer Oil on
the Electric Strength of Transformer Insulation

and at 80°C, $\tan \delta = 0.5\%$, resistivity = 1.88×10^{13} ohm cm. The tests on the two types of instruments, transformer and the power transformer, are described and tests results are plotted in Fig. 2, 3, 4 and 5. It is concluded that in each case, the minimum value of voltage at which thermal breakdown would commence with fresh and used oil is either the same or so little different as not to matter. Where there is a difference, the insulation temperature is in fact much higher than would be observed in service. It is concluded that power transformers in service have sufficient reserve of insulation strength for there to be no special risk in continuing to use oil of impaired properties. The above calculated and experimental data are confirmed by reliable service experience of a number of large transformers, details of which are given. Table 2 gives properties of the oil in a number of German transformers both initially and after six years operation before major overhaul. During this service period the dielectric properties of the winding insulation had deteriorated by

Card 4/5

86622

S/104/60/000/004/001/001
E194/E484

The Influence of the Dielectric Properties of Transformer Oil on
the Electric Strength of Transformer Insulation

a factor of 5 to 8 as compared with the initial values. The power system still has in service 7 large transformers in which the power factor of the oil is greatly in excess of the standard value. It is concluded that it is permissible to leave large transformers in service if the oil has high power factor or low resistivity, but is not wet, until the next major overhaul. However, this is no justification either for not replacing such deteriorated oil in transformers after overhaul or in relaxing the requirements on the oil refineries. There are 5 figures, 3 tables and 7 references: 4 Soviet, 2 English and 1 German.

Card 5/5

NADOLSON, S. I.

PA 19T71

USSR/Telephone Lines - Maintenance and Jun 1946
Repair
Communications - Maintenance and Repair

"Replacement of Damaged Equipment at Inter-City
Telephone Stations," S. I. Nadel'son, 1 p

"Vestnik Svyazi - Elektro Svyaz'" No 6 (75)

Discusses need for being able to make rapid repairs
in case of breakdown in any part of communications
apparatus. Article states that it is necessary for
all personnel charged with responsibility for
apparatus to study the work of the leading stations
with respect to replacement of bad parts.

19T71

LOBANOV, V.I., starshiy inzh.; NADEL'SON, Ye.I.

Expand the resources of flax fiber. Tekst.prom. 21 no.9:5-8
S '61. (MIRA 14:10)

1. Soyuzglavlegpromsy'r'ye pri Gosplane SSSR (for Lobanov).
2. Starshiy ekonomist Soyuzglavlegpromsy'r'ye pri Gosplane SSSR
(for Nadel'son).

(Flax)

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 10, 15-57-10-14731
p 226 (USSR)

AUTHOR: Nadelyayev, K. M.

TITLE: Polar Method for Copying Maps so as to Alter Their
Scales (Polyarnyy sposob pererisovki planov v izmenennom
masshtabe)

PERIODICAL: Tr. Irkut. gorno-metallurg. in-ta, 1956, Nr 10,
pp 140-143

ABSTRACT: Bibliographic entry

Card 1/1

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 10,
pp 58-59

15-1957-10-13796

AUTHOR: Nadelyayev, K. M.

TITLE: Peculiarities of Structure in the Foothills of the Eastern Sayan in the Interstream Region of the Onot and Savina Rivers (Osobennosti tektoniki predgornoy chasti Vostochnogo Sayana v rayone mezhdurech'ya Onota i Savinoy)

PERIODICAL: Sb. nauchn. tr. Irkut. gornometallurg. in-t, 1956,
Nr 12, pp 65-74.

ABSTRACT: The interstream region of the Onot and Savina Rivers is situated on the northeastern limb of the chief Archean anticlinorium of the Eastern Sayan. Here, going from the southwest to the northeast, one can observe the subsequent changes in the Archean rocks in lower Proterozoic and Lower Cambrian time. These rocks of different ages are separated by fault contacts. The Archean formations are chiefly porphyritic granites, but they also include quartzites, amphibolites, and dolomites,

Card 1/3

15-1957-10-13796

Peculiarities of Structure in the Foothills of the Eastern Savan in the Interstream Region of the Onot and Savina Rivers

striking N 20-40° W and dipping steeply (60-85°) to the northeast, and occasionally to the southwest. The attitude of the rock cleavage and of the gneissic structure of the granites is the same. The volcanic-sedimentary deposits of the lower Proterozoic are subdivided into two series: the Kamchadal'skaya (about 900 m) and the Sosnovyy Bayts (1400 m). The Kamchadal'skaya series, in turn, is divided into three horizons: lower amphibolites, magnesite-colomites, and upper amphibolites. The Sosnovyy Bayts series is composed of crystalline, micaceous, and metamorphic schists, and also of iron ore and barren quartzites. The rocks of the lower Proterozoic occur in northwesterly trending folds overturned to the northwest, the limbs dipping at angles on the order of 60-90°. The folded structure is especially well displayed in the Nizhnyaya Bibya river basin, where four anticlines and four synclines are distinguished, transected by biotite plagioclase granite and broken by transverse high-angle faults. A western underthrust, separating the uplifted block of the Archean from the metamorphic sequence of lower Proterozoic

Card 2/3

15-1957-10-13796

Peculiarities of Structure in the Foothills of the Eastern Savan in the Interstream Region of the Onot and Savina Rivers

age, represents a thick fault zone which began to form at the beginning of the Paleozoic and existed until the Triassic, when dolerites were intruded into it. Red sandstones, shales, and gray dolomites of the marine Lower Cambrian series have shallow dips on the northeast ($5-10^{\circ}$), and only in the zone of the eastern underthrust, at the contact with the Sosnovyy Bayts series, do they dip more steeply ($20-60^{\circ}$).

Card 3/3

S. A. Salun

NADELYAYEV. K. M.

265

FILED 1 BOX CONTAINING 80W/2154
indiscreetly filled

See "Type Heavy Metals and/or Volcanic Silica, Com. Light Metal Resources of Northern Alberta, Vol 2" Memoir, 1990. 298 p. (Series: Tm: Study, vps 15) 1,800 copies printed.

Editorial Board: H.S. Alexander, To. P. Beaulieu, V.S. Bruckner, A.P. Li, Doctor of Geological and Mineral Sciences, and To. I. Gerasimov (Bury. RA), Candidate of Technical Sciences; M. of Publishing House: V.S. Malgouyev, M.: P. 8.

REMARKS: This issue of the Eastern Siberian Special Transactions is of interest to structural, exploration and mining geologists, mineralogists, and metallurgists in the light metal industries.

Comments: This collection of articles is a compilation of the reports presented at the 1967 symposium on "The Creation of a Light Metals Industry in Eastern Siberia based on Local Ore" organized by the Laboratory of Electrometallurgy of the Siberian Division Branch of the AN SSSR in October, 1968. It sets forth the purposes of promoting coordination between the activities of the metallurgical industries and the first processing light metals industry of the Eastern Siberia Division. The articles are written by specialists in the metallurgical industry who have been entrusted to the Development, Design and Construction Bureau of the Siberian Division. These bureaus provide the design, economic and technical assistance. Individual articles also report on the following subjects: general questions in the development of the light metals industry in Eastern Siberia, electrolytic ores, pyrolytic synthesis, welding, magnesium ores, etc. References, accompanying each article.

Anderjaska, S. I. Decomposition of Nepheline Syntexes by Nitrogen Oxides

Part 1. V. Neurological Processing Plans for Veterinary Epileptology Notes

PAGE NO. NUMBER AND PAGE UTILIZATION

Donnell, E. J. New Data on the Dolomitic Deposits

Wojew, P.T. Singularities in the Distribution of Maxillo Ores at the Antareskoye Deposit

Danbury, To: I., A.S. Deesmore, and A.P. Dylipian. Combined Treatment of High Iron Content Sulfidated Inertites by Blasting a Two-Component Charge in the Presence of a Reducing Agent

Penner, V.D., and L.P. H. Sulfite-Cementite (Coal) Method of Processing
Southwest Lignite Association Order

Doddab, L.², and A.I. Ivanov. Combined Treatment of Aluminum Oxide from Oxide and High Iron Content Bauxites

ALLAN, V. J., and Y. I. KOSANOV. Study of the Reactions of the Components of the Zetetracycline Deposits

However, I.E. The Problem of Extracting Aluminum Oxide from the
 Old Russian-Constant Aluminum Ore of Eastern Siberia

PAGE IV. IDENTIFICATION AND COLLECTION OFS AND THEIR VARIANTS

Subchapter, E.L.: Custody Deposits of Magistrate and Trials

References, T.O.B., and T.O.Y. Diagram, Electrodeless Method of Extracting Magnesia from the Magnesian Deposits

Intervynals, I.T. Aluminosilicate Method of Separating Calcium from the Elements of the Bor'-Magnesium Deposits

Library of Congress

Date 7/7

8-19-55

AUTHOR: Nadolyayev, K.M. SOV-26-58-3-27/51

TITLE: A Natural Barometer (Yestestvennyy barometer)

PERIODICAL: Priroda, 1958, Nr 3, p 100 (USSR)

ABSTRACT: Basing his knowledge on traditional observations of woodsmen of the Siberian forests, the author suggests a natural reliable barometer. A twig from a spruce tree will point downward when rain is about to come and upward when fine weather is due.
There are 2 figures.

ASSOCIATION: Irkutskiy gorno-metallurgicheskiy institut (Irkutsk Mining-Metallurgical Institute)

1. Weather forecasting--USSR

Card 1/1

NADELYAYEV, K.M.

Onot magnesite and talc deposit. Trudy Vost.-Sib. fil. AN SSSR
no.13:265-272 '58. (MIRA 12:12)

1.Irkutskiy gorno-metallurgicheskiy institut.
(Onot Valley--Magnesite)
(Onot Valley--Talc)

VESELOVSKAYA, T.K.; MACHINSKAYA, I.V.; NADELYAYEVA, A.K.

Certain properties of enol acetates. Part 10: Phenoxylation of ketones by the reaction of their bromo-substituted enol acetates with sodium phenolate. Zhur.ob.khim. 34 no.2:560-565 F '64. (MIRA 17:3)

1. Moskovskiy khimiko-tekhnologicheskii institut imeni D.I. Mendeleeva.

SAKALI, L.I.; NADELYAYEVA, R.V.

Heat balance of the underlying surface of the steppe zone of the
Ukraine in various types of weather. Trudy UkrNIGMI no.52:3-15
'65. (MIRA 18:10)

NADELYAYEVA, V.M.

NADELYAYEVA, V.M.; SHNEYDMAN, A.A.

Roentgenotherapy in glaucoma. Vest.rent.1 rad. no.6:33-38 N-D '53.
(MLRA 7:1)

1. Iz kliniki glaznykh bolezney Irkutskogo meditsinskogo instituta
(ispolnyayushchiy obyazannost' direktora - dotsent N.V.Kositsyn)
(X rays--Therapeutic use) (Glaucoma)

MADELYAYEVA, V.M.; SHNEYDMAN, A.A.

MADELYAYEVA, V.M.; SHNEYDMAN, A.A.

X-ray therapy of glaucoma [with summary in English]. Vest.rent.
i rad. 32 no.4:28-31 J1-Ag '57. (MIRA 10:11)

1. Iz kliniki glaznykh bolezney (zav. kafedroy - dotsent N.V.
Kositsyn) Irkutskogo meditsinskogo instituta (dir. - dotsent K.K.
Alkalayev)

(GLAUCOMA, ther.

x-ray)

(ROENTGEN RAYS, ther. use
glaucoma)

S/121/63/000/003/005/005
E191/E135

AUTHOR: Nadelyuyev, L.I.

TITLE: Design of broaches with a fir-tree profile

PERIODICAL: Stanki i instrument, no.3, 1963, 29-31

TEXT: The broaching of fir-tree profile grooves for blade roots in turbine disks requires high accuracy and surface finish so that the customary broach design, in which cutting takes place around the entire tooth profile, is impracticable. Generator type broaches are the most efficient but do not eliminate scoring owing to the great toughness of the material. To avoid scoring, a broaching scheme is used in which each subsequent tooth is designed with a larger angle. In practice, the advance per tooth amounts to 0.02 - 0.05 mm. Most of the design features of the broach are of standard type. The corrections required to embody the progressive angle scheme are examined. The angle correction is carried out by raising, during the profile grinding operation of the broach teeth, the last tooth in relation to the first (or in relation to the calibration collar). It is shown how the setting-up on the tool

Card 1/2

Design of broaches with a firtree ... S/121/63/000/003/005/005
E191/E135

grinder is computed. The grinding is so performed that, in spite of the lift of the last tooth, the thickness of the first broach tooth, at its base, is exactly equal to the width of the groove in the workpiece, and the thickness of the last broach tooth at its tip is exactly equal to the width of the workpiece groove at the tooth base. These requirements are taken into consideration. The diameter of needle rollers used in inspection of firtree profiles is also computed. There are 8 figures.

Card 2/2

MADEMLYNSKY, M.; NOVAK, J.

Economical operation and control of ash disposal systems. p. 358.
(Strojirenstvi, Vol. 7, No. 5, May 1957, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, no. 8, Aug 1957. Incl.

HADEMLYNSKY, Z., inz.; NOVAK, J., inz., C.Sc.

A new type of flowmeters. Strojirenstvi 12 no.8:620-623
Ag '62.

MUKHA, I.M.; ZGURSKIY, V.A. [Zhurs'kiy, V.A.]; GLOBA, I.V. [Hloba, L.V.];
NADIMSKIY, Yu.N. [Nadima'skiy, I.O.M.]

Use of hard alloys in the textile industry. Ish.prom. no.2:40-42
Ap-Je '55. (MIRA 18:10)

NADENENKO, B S

"Measurement of Traveling Wave Ratio, Input Impedance, and Transmitted Power by the Method of Three Voltmeters," by B. S. Nadenenko, Vestnik Svyazi, No 1, Jan 57, pp 12-13 B.S.

A description of a new method of measuring traveling wave ratio, input impedance of the feeder, and power transmitted by the feeder are given. A concrete example is offered for calculating the feeder parameters using certain selected formulas. A simple measuring circuit is described, which can be readily assembled from ordinary electric components.

The method, originally suggested by B. S. Nadenenko and described in Authorship Certificate No 103236, is based on measuring voltage at three fixed points in a feeder. (U)

S 4 M 1322

NADENENKO B. S.

ANTENNAS & TRANSMISSION LINES

"New Medium Wave Radio Broadcasting Antennas on Low Towers," by B. S. Nadenenko, Engineer, and L. P. Pozdnyakov, Candidate of Technical Sciences, Vestnik Svyazi, No 5, May 1957, pp 11-14.

Description of slot antennas for long and medium waves. It is shown that the use of slot vibrators at these wave lengths does not call for high supporting structures.

Card 1/1

- 4 -

1. 1.10 - Ave D. ... antenna ...

10-12-1/11

distributed and ... current ... uniform ...
 ... for the ... of the flat antenna ...
 ... vertical ... inverting ...
 ... current distribution is ... the antenna ...
 ... metallization ... calculation ...
 ... current density in the ...
 ... (of the current ...
 ... the parameters of ...
 ... and the ... in feeding ...
 ... required efficiency ...
 ... is furthermore ... input resistance ...
 ... the antenna. Calculation ...
 ... rigorous theory is one ...
 ... of the antenna ...
 ... carried out in a ...
 ... the application of this theory ...
 ... formulae for the calculation ...
 ... calculation ...

2. 2/3

Flat-gap Broadcating Antenna on Low Posts

100-12-6/'10

the flat gap antenna. The formulae for the computation of the wave resistance of the distribution feed line, of the phase constant, and the gap dying-out constant are given. It is shown that the maximum potential in the antenna is obtained at the end of the horizontal part. Its calculation can be carried out on the basis of the theory of the long line. The necessary formula for computation is given here without any derivation. The experimental investigation of the flat gap vibrator was carried out on a short-wave antenna model, and its results showed good agreement with those obtained by computation. A. Z. Ayzenberg's attention was attracted by this paper. There are 12 figures.

AVAILABLE: Library of Congress

1. Antennas-Broadcasting-Mathematics-Theory

0 11 1/3

MADEMENKO, B.S., Inzhener.

Measuring the coefficient of a traveling wave, input resistance and
transmitted power by the method of three voltmeters. Vest.sviazi 17
no.1:12-13 Ja '57. (MLBA 10:2)
(Antennas (Electronics))

NADENENKO, B. S., Cand Tech Sci -- (diss) "Employment of ^{slotted} ~~slot-fed~~ ^{oscillators} ~~dipoles~~
as weakly-directional^{ed} long-wave, ~~short wave~~, and medium-frequency wave
broadcasting antennas." Mos, Svyaz'izdat, 1958. 12 pp (Min of Commu-
nications USSR, Mos Electrical Engineering Inst of Communications),
125 copies (KL, 16-58, 120)

-67-

SOV/106-58-10-4/13

AUTHORS Nadenenko, B.S., Lyalikov, V.V.

TITLE: Analysis of the Directional Properties of an Angle Antenna
(Analiz napravlennykh svoystv ugolkovoy anteny)

PERIODICAL: Elektrosvyaz', 1958, Nr 10, pp 26 - 31 (USSR)

ABSTRACT: Calculation of the polar diagram of an angle antenna by the mirror image method leads to considerable error when the dimensions of the reflector are comparable with the wavelength. In this article an approximate method of calculation of the polar diagram in the plane perpendicular to the edge of the reflector is described. The polar diagram in this plane depends on the length of the reflector (b of Fig 1) and to a much smaller degree on the width of the reflector. Therefore, in this analysis, it is assumed that the width of the reflector is infinite. The angle antenna is shown in Fig 1. The edge of the reflector coincides with the z axis of a cylindrical system of co-ordinates. The dimension of the reflector along the z axis is infinite. The antenna is excited by an infinitely long conductor parallel to the z axis. A syn-phase current of constant value flows in the conductor. The problem of radiation from an infinitely long conductor carrying a

Card 1/3

30V/106-58-10-4/13

Analysis of the Directional Properties of an Angle Antenna

syn-phase current, placed in an angle reflector of infinite dimensions was solved in Ref 1. The vector potential of the electromagnetic field of the conductor is given by Equation (1), in which the following symbols are used:

$H_{\frac{m}{a}}^{(2)}(kR)$ - Hankel function of the second type of $\frac{m}{a}$ order;

$I_{\frac{m}{a}}(ka)$ - Bessel function of the $\frac{m}{a}$ order;

R) - Co-ordinates of the point at which the vector potential is calculated;

a) - Co-ordinates of the radiating conductor.

It is found that the vector potential of an angle antenna with an infinite reflector is given by Equation (10) where $A^{\vec{r}}$ is the vector potential defined by the current in the exciting conductor. For determination of the vector

Card 2/3

SOV/106-58-10-4/13

Analysis of the Directional Properties of an Angle Antenna

potential of an angle antenna with a reflector of finite dimensions, it is necessary to integrate in Equation (10) over the limits 0 to b , where b is the length of the reflector. The distribution of current in the reflector of finite dimensions will differ somewhat from the current distribution in an infinite reflector but experimental results show that the change in distribution can be ignored in practice. Considering that the electric field strength is directly proportional to the vector potential, Equation (14) is obtained for calculation of the polar diagram of an angle antenna. For convenience of calculations, the auxiliary function $R(kb, \varphi)$ is calculated for different values of kb and the results tabulated in Table 1. Candidate of Technical Sciences V.G. Yampol'skiy gave advice in this work. There are 5 figures, 1 table and 1 reference (Soviet).

Card 3/3

SUBMITTED: April 26, 1958

B S. NADENENKO

10 июня
(с 10 до 16 часов)

В. С. Кузнецов

Новый метод приближенного решения интегрального уравнения теории антенн.

В. В. Таланов

И. порог и возбуждение диэлектрических волноводов.

О. Г. Векленко

Система линейных уравнений с операторными координатами.

10 июня
(с 16 до 22 часов)

Г. К. Фридрих

Физическая теория дифракции электромагнитных волн (резюме).

А. Н. Чепин

Метод расчета коэффициента отражения антенны от экрана.

10

В. С. Кузнецов

И. А. Гусевский

Влияние условий распространения на антенны, расположенные на поверхности Земли, в расчете волноводов и трансформаторов.

С. И. Беликов

Антенны безлучевые для приема сигнала.

В. Д. Кузнецов

А. И. Беликов

Система уравнений для расчета антенны с радиационными элементами.

11 июня
(с 10 до 16 часов)

В. С. Кузнецов

Дифракция электромагнитных волн на поверхности Земли.

В. С. Кузнецов

Расчет коэффициента отражения антенны.

В. И. Беликов

О статистических характеристиках коэффициента отражения антенны с случайными параметрами.

11

report submitted for the General Meeting of the Scientific Technological Society of
Radio Engineering and Electrical Communications in. A. S. Popov (VSEI), Moscow,
6-12 June. 1959

SOV/106-59-5-5/13

AUTHOR: Nadenenko, B.S.

TITLE: The Problem of Selection of the Reflector Dimensions of a Vee Antenna (K voprosu o vybore razmerov reflektora ugolkovoy antennoy)

PERIODICAL: Elektrosvyaz', 1959, Nr 5, pp 43-45 (USSR)

ABSTRACT: This article is a continuation of the author's previous work (Ref 2) in which the effect of the finite dimensions of the reflector of vee-antennae on the polar diagram was investigated. The author now produces a method of calculating the gain of antennae with finite reflector dimensions. The method initially assumes a half-wave radiator but the results are extended to vee-antennae with more complicated radiators. The gain of an antenna is first calculated, assuming infinite reflector dimensions, and then the gain, in the direction of maximum radiation, of an antenna with finite reflector dimensions is obtained from the formula

$$\epsilon = \epsilon_{\infty} \frac{F_{k \max}^2(\varphi)}{F_{\infty \max}^2(\varphi)} \frac{R_{\epsilon_{\infty}}}{R_{\epsilon k}} \quad (1)$$

Card 1/3

SOV/106-59-5-5/13

The Problem of Selection of the Reflector Dimensions of a Vee Antenna

where ϵ_{∞} is the gain for infinite dimensions;
 $F_k \max(\varphi)$ - a magnitude proportional to the field strength in the direction of the maximum field strength;
 $R_{\Sigma k}$ - the radiation resistance for finite dimensions;
 $F_{k \max}$ and $R_{\Sigma \infty}$ are the same values for an antenna with a reflector of infinite dimensions. Provided the length of the reflector (dimension b of Fig 1) is more than twice the distance of the radiator from the end of the reflector (dimension a of Fig 1), then

$$\frac{R_{\Sigma \infty}}{R_{\Sigma k}} = 1$$

Since, in practice, the direction of maximum radiation coincides with the bisector of the reflector angle, the value $\varphi = \alpha/2$ is substituted in Eq (2) and (3) (obtained from Ref 2) which express the directional properties of the antenna. Hence, expressions are obtained for $F_k(\varphi)$ and F_{∞} (Eq 4). From Eq (1), (2), (3) and (4) the antenna gain for a half-wave radiator in free space can be calculated. The value of ϵ_{∞} (calculated by the mirror

Card 2/3

SOV/106-59-5-5/13

The Problem of Selection of the Reflector Dimensions of a Vee Antenna

image method, assuming infinite reflector dimensions) is taken from graphs in Ref 1. The results of calculation of the gain are presented graphically in Fig 2. Fig 2 shows that the gain with finite dimensions is substantially less than with infinite dimensions and also that with minimum reflector dimensions, corresponding to $\epsilon = \epsilon_{\infty}$, the gain of the vee-antenna is approximately equal to the gain of a "synphase" surface, the magnitude of which equals the aperture surface of the vee-antenna. There are 2 figures and 3 Soviet references.

SUBMITTED: 26th April 1958

Card 3/3

42274

S/809/62/000/000/001/003
E192/E382

9. 1. 000
AUTHOR: Nadnenko, L.V.

TITLE: Mobile measuring units for investigating the
propagation of ultrashort waves

SOURCE: Novyye razrabotki v oblasti kontrol'no-izmeritel'noy
apparatury; informatsionnyy sbornik. Ed. by A.S.
Vladimirov. Moscow, Svyazizdat, 1962, 4 - 15

TEXT: The equipment was designed primarily for investigating
the propagation conditions on ultrashort-wave radio-relaying
links. A mobile unit comprises measuring and auxiliary equipment,
independent supply sources and demountable masts with antennas.
The supplies and equipment are housed in two lorries, while the
antenna devices occupy another lorry. A set of antenna equipment
comprises a demountable mast up to 25 m high (consisting of eight
sections, 2.5 m each, and a stand of 3.5 m high). The mast is
provided with a jacking arrangement which permits its assembly
by connecting a section from below. The antenna is a parabolic
mirror of 1.5 m in diameter with a resonant radiator for waves
of 8 and 16 cm with different polarizations. Adjustment of the
antenna in the horizontal plane can be effected by remote control
Card 1/2

Mobile measuring units ...:

S/809/62/000/000/001/003
E192/E382

from the equipment lorries. The gain of the antenna at 8 cm wavelength is 30 db and at 16 cm it is 25 db. The antenna system comprises also a trolley which can be moved up and down the mast from a height of 3.5 to 24.5 m. This carries a receiver antenna, which is 0.5 m in diameter and has a gain of 20 db at the 8 cm wavelength and 15 db at 16 cm. The supply lorry is fitted with two internal combustion engines driving synchronous generators producing 5 kW at 220 V, the voltage being stabilized to within $\pm 5\%$. The transmitting equipment consists of: 1 - a magnetron generator for 7-9 cm wavelengths; 2 - a klystron generator for 7 - 9 cm wavelengths; 3 - a transmitter for 15-17 cm wavelengths. The auxiliary equipment of the transmitter consists of: power-meters; wave-meters; a measuring line and equipment for monitoring the radiated power. The receiver equipment comprises: two direct measuring sets for the fields at a wavelength of 7-9 cm; a high-sensitivity receiver for the wavelengths of 7-9 cm; a standard signal-generator for 7-9 cm; a receiver for 15-17 cm wavelengths and a signal-generator for this range; automatic recording milliammeters and a set of spare components and instruments. There are 6 figures

Card 2/2

NADENKO, L.V.

Statistical distribution of the attenuation multiplier at
intervals in radio relay lines. Elektrosviaz' 1966. 12:
5-18 D '65 (MIRA 19:1)

NADENENKO, S. I.

PA 19T4

USSR/Antennas - Drives
Antennas, Fixed

Apr 1946

"Antenna Excitation by a Magnetic Field," S. I.
Nadenenko, Candidate of Mech Sci, 10 pp

"Radiotekhnika" Vol I, No 1

Analysis and methods of computation for the excitation circuit of a mast-type antenna with a grounded base. Excitation is by a toroidal system of coils placed at the base of the mast. Article proves that, in the antenna considered, it is possible to achieve the same maximum power as in a mast-type antenna with an insulated base.

19T4

NADENENKO, S. I.

PA 19T9

USSR/Antennas - Ground Systems
Antennas - Design

May 1946

"Choosing the Size of Grounding Systems for Antennae," S. I. Nadenenko, Candidate of Tech Sci, 11 pp

"Radiotekhnika" Vol I, No 2

A method for determining the optimal sizes of grounding systems for a given number of wires, or for determining the number of wires when the radius of the grounding system is given. Brown's method for calculating the ground resistance of a broadcasting antenna is taken into consideration.

19T9

. NADENENKO, S.I.

Category : USSR / Radio Physics. Radiation of Radio Waves. Transmission Lines and Antennas 1-3

Abs Jour : Ref Zhur - Fizika No 3, 1957, No 7276

Author : Nadenenko, S.I.

Title : Ways of Increasing the Effectiveness of Simple Wide-Band Antennas

Orig Pub : Radiotekhnika, 1956, 11, No 8, 25-30

Abstract : Analysis of methods for increasing the directivity properties of wide-band short wave VGD (horizontal dipole) antennas. The antenna is a symmetrical dipole, each part of which consists of several almost parallel conductors, connected on one side to the supply point, and on the other side to the point where the dipole is secured to the mast. To obtain a one-directional radiation with an optimum directivity pattern for short waves it is proposed that such a wide band antenna be placed ahead of a flat reflector wall, consisting of thin conductors parallel to the dipole. It is then possible to assume the dipole to be placed in the aperture of an angle reflector, one

Card : 1/ 2

- 23 -

Category : USSR, Radio Physics, Radiation of Radio Waves. Trans-
mission Lines and Antennas

I-5

Abs Jour : Ref Zhur - Fizika No 3, 1977, No 72/73

place of which is the wall of the reflector, and the other is the ground. Equations, calculations and plots of the directivity pattern, of the input impedance, of the bandwidth, and the gain are given for various antenna geometries and for various frequencies. Arrangement diagrams and supply diagrams are given for one-directional wide band antenna, consisting of an oblique symmetrical dipoles with a V-shaped lattice reflector. Calculations show that along with lower cost and lower operating expenditures, the V-shaped antenna has also better operating indices in the operating wave band than the rhombic (or rhombic horizontal) antenna.

Card : 2/2

- 24 -

6(4)

AUTHOR:

Nadenenko, S. I., Regular Member of
the Society

SV 106-11-11-2.15

TITLE:

Ways of Increasing the Efficacy of Simple Wide-Band
Antennae for Short Waves (Puti povysheniya effektivnosti
prostykh diapazonnykh korotkovolnovykh antenn)

PERIODICAL:

Radiotekhnika, 1958, Vol 13, Nr 11, pp 5-10 (USSR)

ABSTRACT:

The possibility of further increasing the amplification
factor of a horizontal wide-band vibrator by shifting it
within a V-reflector formed by two intersecting planes is
investigated. One of the reflecting planes is the surface
of the earth, the other is a lattice made of horizontal lines
which is inclined towards the earth at a certain angle (Ref 2).
The results obtained by a detailed calculation of a wide-band
antenna for short waves are described. The antenna consists
of a horizontal wide-band vibrator in a V-mirror. It is shown
that such an antenna is, as regards efficacy, equivalent to
the simple rhombic antenna

RG $\frac{65}{4}$ R, but that it is

Card 1/2

Ways of Increasing the Efficacy of Simple
Wide-Band Antennae for Short Waves

SOV. 108-13-11-2/15

much more economical and takes up a smaller area of the
antenna field. There are 10 figures and 6 Soviet references.

ASSOCIATION: Nauchno-tekhnicheskoye obshchestvo radiofiziki i elektrosvyazi
im. A.S. Popova (Scientific-Technical Society of Radio Engineering
and Electro-communications im. A.S. Popov)

SUBMITTED: February 25, 1958

Card 2/2

9(1)

PHASE I BOOK EXPLOITATION

SOV/3111

Nadenenko, Sergey Ivanovich

Antenny (Antennas) Moscow, Svyaz'izdat, 1959. 550 p. Errata slip inserted. 20,000 copies printed.

Resp. Ed.: G.N. Kocherzhevskiy; Tech. Ed.: G.I. Shefer; Ed.: A.I. Voronova.

PURPOSE: This book has been approved as a textbook for students of radio communications by the Ministry of Higher Education, USSR, for use in electrical communications institutes and in radio engineering departments of institutions of higher education. The book complies with the approved course on antennas.

COVERAGE: The book discusses the following topics: theory of electromagnetic radiation; elementary radiators and their parameters; emission and reception of radio waves; antennas for long-, medium-, and short waves; microwave antennas; and transmission lines. Many problems of antenna theory and technique were of necessity

Card 1/8

Antennas

SOV/3111

omitted. Those of theoretical and practical value, however, were included and appear in small print. The reader is assumed to be acquainted with the fundamentals of electromagnetic field theory. A list of recommended literature is included. The author thanks the following persons for their help: A.A. Pistol'kors, Corresponding Member of the Academy of Sciences, USSR, G.T. Markov, Professor, and G.N. Kocherzhevskiy, Candidate of Technical Sciences. References are given in footnotes in the text.

TABLE OF CONTENTS:

Foreword	3
Introduction. Historical Review of Developments in Antenna Technique	5
Ch. 1. Fundamental Theory of the Emission of Radiowaves	
1. General method of calculating the forces of an electromagnetic field	20
2. Elementary radiators in an infinite space	33
Ch. 2. Elementary Radiators	
Card 27 8	

NADENIK, F. ; TUMA, J.

Welded shaped water pipes with large profiles. p. 262.

VODNI HOSPODARSTVI. (Ministerstvo energetiky a vodního hospodarství
a Vedecká technická společnost pro vodní hospodarství) Praha,
Czechoslovakia, No. 6, June 1959.

Monthly List of East European Accession (EEAI), LC Vol. 9, no. 2,
Feb. 1960.

Uncl.

NADENK, F., inz.

Institute of the Management of Water Resources. Vodni
hosp 13 no.12:443 '65.

NADENIL, OZAKAR

Partial dehydroxylation of pyrocatechin and homologs
without pressure. (Nadine Nadenil. Chem. Prilozh 4(29),
251-4(1954).) Simple products were obtained from waste
waters from the treatment of brown coal contg. pyrocatechol
and homopyrocatechol (4-methylpyrocatechol). Hydro-
genation was made in a lab. vertical continuous reactor in
gaseous phase at 440° with Mo catalyst. Phenol and all 3
cresol isomers were obtained in various yields, up to 64% of
the theory. Aromatic hydrocarbons were the by-products.
L. A. Hefrich

Nadenik, OtaKae

✓ Anion exchangers from pyridine bases. OtaKae Nadenik.
Chem. Průmysl 5, 280-82 (1956).—Homologs of N-vinyl-2-pyrrolidone
pyridinium hydronide with CH₂ groups in at least the 3,4 or
the 7,8 positions were condensed with CH₂O to give a basic
anion exchanger. The quaternary N enables these resins
to remove from aq. solns. mineral and organic acids, phe-
nols, H₂S, and CO₂. From the solns. of neutral salts of
strong acids and bases the acid component is removed even
at pH above 7. The exchanger is regenerated by dil. solns.
of NaOH, Na₂CO₃, and NH₄. L. A. Helwig

CH

2

18

NADENIK, O.

4
0
0
0

CHEMICKY PRUMYSL

Chemical Industry (Czechoslovakia)

Vol 6(31), Nr 10, October, 1956, pp 397-440

Chemical fuels
NADENIK, O.: Experiments With the Light Phase (Cut) During the Manufacture of Hydrogenation Benzine (Fuel)

D
The behaviour of the catalyst for the cut 6434 was investigated during the production of benzine by cracking of aromatic middle oils obtained from the destructive hydrogenation of Bohemian brown coal tars. The aim of the investigation was to obtain higher octane numbers, longer life of the catalyst, higher yields and the possibility of recycling of the light cut. Results obtained are discussed.

jm PM LPH

NADENIK, O.

"Laboratory research in gasification of waste products from coal-washing plants." Pt.2. P. 130.

PALIVA. (Ministerstvo paliv a Ceskoslovenska vedecka technicka spolecnost pro byuziti paliv pri Ceskoslovenske akademii ved). Praha, Czechoslovakia, Vol. 39, No. 4, Apr. 1959.

Monthly list of East European Accessions (EEAI), LC, Vol. 8, No. 8, August 1959.
Uncla.

MAHAN, Bohuslav, akademik, laureat statni ceny; KAUT, Vl., inz.;
SVORCOVA, S., MUDr.; TUSL, M., MUDr., C.Sc.; RABA, Jan.;
MATERNA, Jan, inz.; KLIMECEK, Rostislav; BETTELHEIM, Jan, inz.;
HALA, Eduard, doc., inz., dr.; UHER, L., inz.; KORDIK, E.;
ERDOS, Emerich, doc., inz., dr.; VOSOLSOBE, Jan, doc., inz., dr.;
NADENIK, O., inz.; HRUDKA, J.; HOSTALEK, Zdenek, inz., dr.;
RADL, K., inz.; PEKANEK, Vl., MUDr.; BLISTAN, J., inz.; STORCH, O.
inz.

A national conference on protection against chemical fumes
from electric heat plants; a summary of reports. Energetika Cz
11 no.2:109-111 F '61.

NOVAK, J.; LUDVIK, V.; NADENIK, O.

Laboratory research on accelerated coal carbonization by
solid heat carrier. Prace Ust paliv vol. 7:76-121 '64.

NADENIK, Otakar

Investigating the possibility of reducing sulfur exhalations
by carbonizing powerhouse coal by a solid heat carrier. Prace
Ust paliv 8:98-116 '64.

NADENIK, ZBYNEK

Nádeník, Zbyněk. Sur les courbes polaires de la cubique gauche. Časopis Pěst. Mat. Fys. 75, D131-D139 (1950).
(Czech. French summary)

If the points Y, Z are harmonic conjugates with respect to two points on the cubic curve c given by $x_i = t^i - t^{i-1}$, $i = 1, 2, 3, 4$, then Z is called the pole of Y with respect to c . If Y describes a curve k , Z describes the polar curve of k . The author studies the influence of various types of contact of k and c on the polar curve. He also finds necessary and sufficient conditions for a cubic curve k to be identical with its polar, if k and c have 4, 3, or 2 points in common.

F. A. Behrend (Melbourne).

Source: Mathematical Reviews,

Vol 12, No. 4 1

WADENIS, 2.

Mathematical Reviews
Vol. 14 No. 8
Sept. 1953
Geometry.

Nádeník, Zbyněk. Les courbes de Bertrand dans l'espace à cinq dimensions. Čechoslovack. Mat. Ž. 2(77), 57-87 (1952). (Russian. French summary)
Verfasser löst das folgende Problem: unter welchen Bedingungen existiert im euklidischen Raum von fünf Dimensionen wenigstens ein Kurvenpaar, dessen begleitende Fünfheine eine in Bezug auf euklidische Bewegungen invariante Figur bilden? Jedes solche Kurvenpaar heisst ein Bertrandpaar im Raum von 5 Dimensionen. Verfasser gewinnt acht Sätze über derartige Kurvenpaare, deren jeder auf mehrere Unterfälle führt. Die Resultate stehen mit ähnlichen im Zusammenhang, die E. Čech im euklidischen vierdimensionalen Raum gewonnen hat. Insbesondere werden notwendige und hinreichende Bedingungen dafür angegeben, dass eine Kurve mit den Kurven eines ein- oder zwei-parametrischen Systems Bertrandpaare bildet. Sind z.B. drei assoziierte Kurven vorgeschrieben, so ergibt sich für Bertrandpaare notwendig konstantes Verhalten--sei es für die Krümmungen der Kurven selbst, sei es für deren Verhältnisse. Verfasser gewinnt eine vollständige Übersicht über alle Bertrandpaare im euklidischen Raum von fünf Dimensionen.
M. Píul (Dacca).

NADENIK, ZBYNEK

Nádeník, Zbyněk. On projective differential invariants of a plane congruence of curves. Casopis Pěst. Mat. 78 (1953), 229-258. (Czech)

Math
On étudie le système complet des invariants différentiels de la congruence plane V des courbes à l'aide des méthodes du repère mobile de E. Cartan. On considère aussi la correspondance nulle qui existe entre les points A et les tangentes des courbes (A) de la congruence V construites dans les points A . En partant de cette correspondance et en utilisant l'environ du 2^e ordre on peut adjoindre à chaque point A le faisceau des coniques qui possèdent dans le point A le contact du 3^e ordre et qui touchent la courbe (A) (avec le contact juste du 1^{er} ordre dans A). On obtient les nouveaux systèmes des courbes en considérant les cas particuliers des repères de la congruence V et on étudie aussi les cas dans lesquels quelques-uns de ces systèmes des courbes sont confondus.

F. Vycichla (Prahá)

Sm

Nadenik, Zbynek

Nadenik, Zbynek. Les surfaces analogues aux courbes de Bertrand. Czechoslovak Math. J. 5(140) (1950), 194-219. (Russian. French summary)

Verfasser betrachtet Flächenpaare $r(u, v)$ und $r^*(u, v)$ im dreidimensionalen euklidischen Raum und auf beiden Paare orthogonaler Kurvenkongruenzen O_1, O_2 auf r und O_1^*, O_2^* auf r^* . Die zugehörigen Tangentenvektoren seien t_1, t_2 und t_1^*, t_2^* und die Flächen-normalenvektoren n und n^* . Gesucht wird eine eindeutige Abbildung C der beiden Flächen, derart daß erstens die Normalen in r und $r^* = Cr$ nicht derselben Ebene angehören, zweitens die Beziehungen

$$t_1^* = \lambda_1 t_1 + \lambda_2 t_2 + \lambda_3 n$$

$$r^* = r + \epsilon_1 t_1 + \epsilon_2 t_2 + \epsilon_3 n, \quad t_2^* = \mu_1 t_1 + \mu_2 t_2 + \mu_3 n$$

$$n^* = \nu_1 t_1 + \nu_2 t_2 + \nu_3 n$$

bestehen für jedes entsprechende Punktepaar der Abbildung. Dabei sind $\epsilon_i, \lambda_i, \mu_i, \nu_i$ ($i=1, 2, 3$) Konstante und die Matrix $(\lambda \mu \nu)$ ist orthogonal (Analogie zu Bertrand's Kurvenpaaren). Lösungen des Problems heißen B -Flächen, die zugehörigen Kongruenzen B -Kongruenzen und r^* assoziiert zu r . Sind f_1, a, b bzw. geodätische Krümmung, Normalkrümmung und geodätische Torsion einer

Nadenik, Zbynek.

Surfaces analogous to the Bertrand curves.

Wath

NADENIK, ZBYNEK

Kurve aus O_1 und analog $I_2, c, -b$ aus O_2 , so ist r dann und nur dann eine B -Fläche, wenn

$$I_1 = pa + qb + r_1,$$

$$I_2 = p^2 + qc + r_2, \quad p, q, r_1, r_2 \text{ Konstante, } r_1^2 + r_2^2 \neq 0.$$

Das Analogon zur bekannten Bertrandschen Beziehung zwischen Krümmung und Torsion einer Bertrandschen Kurve lautet für eine Bertrandsche Fläche

$$(p^2 + q^2 + 1)K + (pr_1 + qr_2)H + r_1^2 + r_2^2 = 0.$$

Weiterhin werden spezielle Eigenschaften von B -Flächen studiert, insbesondere solche abwickelbarer B -Flächen.

M. Pini (Köln)

7/6

MADENIK, Z.

MADENIK, Z. A cinematic property of surface curves. p. 140.

Vol. 1, No. 3, 1956.

MATEMATICKO-FYZIKALNÉ VESNÍK

SCIENCE

Bratislava, Czechoslovakia

So: East European Accession, Vol. 1, No. 3, March 1957

Nádeník, Zbyněk

Nádeník, Zbyněk. L'élargissement du théorème de Méné-
~~laire de Ceva~~, sur les figures n -dimensionnelles.
Casopis Pěst. Mat. 81 (1956), 1-25. (Czech. Russian
and French summaries)

NADENIK, Zbyněk (Praha)

Integral geometry. Pokroky mat fyz astr 7 no.2:75-79 '62.

NADENIK, Zbynek, doc., dr., C.Sc.

Approximate conformal projection of a reference ellipsoid.
Aplikace mat 7 no.6:441-449 '62.

1. Ceske vysoke uceni technicke, Praha 2, Trojanova 3.

NADYNIK, Zbynek, doc., RNDr., C.Sc.

Error evaluation in approximate formulas for setting points of a clothoid by right-angled coordinates from its general tangent. Geod kart sbor 8: 21-27 '62

1. Katedra matematiky a deskriptivni geometrie fakulty stavebni, Ceske vysoke uceni technicke, Praha.

NADENIK, Zbynek, doc., RNDr., C.Sc.

Determination of the crossing point of a straight line and a
clothoid. Geod kart obzor 8 no.9:161-163 S '62.

1. Katedra matematiky a deskriptivni geometrie, stavebni fakulta,
Ceske vysoke uceni technicke.

NADENIK, Zbyněk

On the volume of a body bound by the envelope of a single-parameter system of convex cylindrical surfaces. Cas pro pest mat 88 no.2:200-208 '63.

1. Ceske vysoke uceni technicke, Praha 2, Trojanova 13.

NADENIK, Zbynek, doc., RNDr., CSc.

On angles between the geodetic line and opposite normal cuts.
Geod kart sbor 9:71-75 '63.

1. Katedra matematiky a deskriptivni geometrie stavebni fakulty,
Ceske vysoke uceni technicke, Praha.

NADENIK, Zbynek

Generalization of Guldin's rules. Cas pro pest mat 38 no.3:
311-316 Ag '63.

1. Ceske vysoke uceni technicke, Praha 2, Trojanova 13.

NADENIK, Zbynek

On the existence of a polygon with given direction of sides.
Gas pro pest mat 88 no.3:317-321 Ag '63.

1. Ceske vysoke uceni technicke, praha 2, Trojanova 13.

L 10612-66 EWT(d) LJP(c)

ACC NR: AP6004060

SOURCE CODE: CZ/0081/65/090/002/0209/0213

AUTHOR: Bocek, Leo--Bocek, L. (Prague); Nadenik, Zbynek (Prague)

32

ORG: none

B

TITLE: Total differential geometry of curves in Euclidean space

SOURCE: Casopis pro pestovani matematiky, v. 90, no. 2, 1965, 209-213

TOPIC TAGS: Euclidean space, differential geometry, curve geometry, plane geometry, space geometry

ABSTRACT: The Minkovskiy definition of the support function of a plane enclosed convex curve is extended to closed space curves with positive curvatures and is applied for the derivation of results which are analogous to the known properties of plane closed convex curves. Orig. art. has: 10 formulas. [JPRS]

SUB CODE: 12 / SUBM DATE: 09Jun64

Card 1/1

L 10603-66 EWT(d) IJP(c)
ACC NR: AP6004061 SOURCE CODE: CZ/0081/65/090/002/0214/0219
44, 55
AUTHOR: Kadenik, Zbynek (Prague) 20
ORG: none B
TITLE: Closed space curves
SOURCE: Casopis pro pestovani matematiky, v. 90, no. 2, 1965, 214-219.
TOPIC TAGS: curve geometry, space geometry, plane geometry
ABSTRACT: For a closed space curve ^{16, 44, 55} the support function is defined as the oriented distance of the origin from the rectifying plane. Orig. art. has: 11 formulas.
[JPRS]
SUB CODE: 12 / SUBM DATE: 09Jun64 / ORIG REF: 002 / OTH REF: 001

Card 1/1

L 10604-66 EWT(d) IJP(c)

ACC NR: AP6001062

SOURCE CODE: CZ/0081/65/090/002/0220/0225

AUTHOR: Kadenik, Zbynek (Prague)

ORG: none

TITLE: Intensification of a Frobenius inequality for the mixed area of convex figures
16.44.55

SOURCE: Casopis pro pestovani matematiky, v. 90, no. 2, 1965, 220-225

TOPIC TAGS: differential geometry, plane geometry, geometry

ABSTRACT: Wirtinger's lemma has been intensified into an inequality which permits improving to form (D) Frobenius' inequality for the mixed area M of convex figures with the areas F_1 and F_2 , the boundary lengths L_1 and L_2 and the breadths B_1 and B_2 in the same direction. The intensification of the inequality makes it possible to establish figures characterized by an equal sign in (D). [JPRS]

SUB CODE: 12 / SUBM DATE: 09Jun64 / OTH REF: 009 / SOV REF: 002

Card 1/1

L 10605-66 EWT(d) IJP(c)

ACC NR: AP6001063

SOURCE CODE: CZ/0081/65/090/002/0226/0229

AUTHOR: Nadenik, Zbynek (Prague)

ORG: none

TITLE: Upper and lower estimates for the isoperimetric deficit of polygonal envelopes symmetric relative to the axes of convex cylindrical surfaces

SOURCE: Casopis pro pestovani matematiky, v. 90, no. 2, 1965, 226-229

TOPIC TAGS: polygonometry, geometry

ABSTRACT: For the volume V and area O of a body homeomorphous with a torus which has been composed of parts of a finite number of convex cylinders symmetric relative to the axis, each two adjacent ones of which have a common tangential plane, where the polygon formed by their axes has the length l , three valid inequalities are given. Orig. art. has: 6 formulas. [JPRS]

SUB CODE: 12 / SUBM DATE: 09Jun64 / OTH REF: 003

HW

Card 1/1

L 45396-65 EWT(1)/EFC-4/EEC(t)/T/FGS(k) P1-4/Pj-4/P1-4/Pac-4 WR

ACCESSION NR: AP5010864

UR/0286/65/000/007/0036/0036

AUTHORS: Ayzenberg, G. Z.; Nadennko, B. S.

TITLE: Double image antenna. CLASS 21, No. 169572

SOURCE: ^{25B}Byulleten' izobreteniy i tovarnykh znakov, no. 7, 1965, 36

TOPIC TAGS: antenna

ABSTRACT: This Author Certificate presents a double image antenna consisting of a large parabolic mirror, an additional specially shaped mirror, and an exciter. To broaden the frequency range and to increase the coefficient of aperture surface utilization, the exciter is made in the form of a dephased horn with an aperture angle greater than 90° .

ASSOCIATION: Gosudarstvennyy nauchno-issledovatel'skiy institut ministerstva svyazi SSSR (State Scientific Research Institute, Ministry of Communications, USSR)

SUBMITTED: 24Jun64

ENCL: 00

SUB CODE: EC

NO REF SOV: 000

OTHER: 000

Card 1/1

E 42076-66 EWT(d)/FSS-2 RB

ACC NR: AP6011662

SOURCE CODE: UR/0106/66/000/004/0001/0007

AUTHOR: Nadenenko, L. V.; Troitskiy, V. N.

ORG: none

TITLE: Use of passive repeaters of the diffraction-lens type for radio relay lines
with ordinary spacing

SOURCE: Elektrosvyaz', no. 4, 1966, 1-7

TOPIC TAGS: microwave relay, microwave communication, microwave attenuator,
electromagnetic wave diffraction, microwave antenna, electric component

ABSTRACT: Two previous articles in the FSB by V. N. Troitsky and coworkers
have discussed the theory and experimental results of mounting metallic
diffraction lens grids on mountain peaks in order to lessen the other-
wise severe attenuation of an impinging microwave signal. Data from
several microwave links in mountainous areas showed a substantial
reduction in signal loss when a lens of the proper geometry was placed
on an intervening peak.

In further studies of this technique, the present authors have ex-
amined the effects of passive lens repeaters in more moderate terrain,
described only as a forest-steppe region in western USSR. A profile
of the test path is shown in Fig. 1. Transmitting and receiving antennas

Card 1/5

L 42076-66

ACC NR: AP6011662

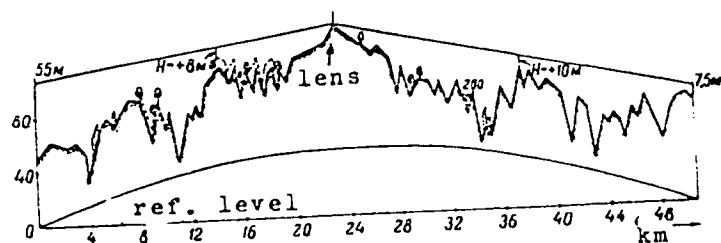


Fig. 1. Transmission path profile

were approximately 50 km apart; the intervening terrain was a hilly region with a dominant peak about halfway in between. Transmitter and receiver were at heights of 55 m and 7.5 m, respectively, and operated on a wavelength of 8.4 cm. The lens chosen for the peak was 55 m wide and 8.5 m high at its center maximum, and was fabricated from grid sections having a 10 x 10 mm mesh. Fig. 2 shows the construction.

Card 2/5

ACC NR: AP6011662

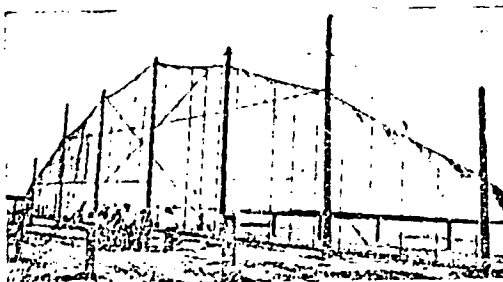


Fig. 2. Lens construction

As a control, two additional microwave lines with active repeaters were set up over similar terrain, also with roughly 50 km separation between stations. All three of the links were operated simultaneously during the summer months of 1963 and 1964, and for extended periods the received signals were recorded around the clock. More than 2000 hours of recording were made for the passive link alone during this time. The main intent of the program was to assess the effectiveness of the lens in reducing attenuation, and to compare the frequency and severity of signal fades in the passive and active links. Variations in lens con-

Card 3/5

L 42076-56
ACC NR: AP6011662

figuration were tried to determine the effect on these two criteria; for example, the lens was dismantled a section at time while the signal was monitored for discrete changes. When the lens had been completely removed, signal attenuation had increased by 6—8 db, which agreed with calculations.

Recordings from the passive link showed that fades tended to be mostly of a relatively slow type (on the order of minutes) and appeared often in the early morning hours. These effects are seen in the sample recording shown in Fig. 3.

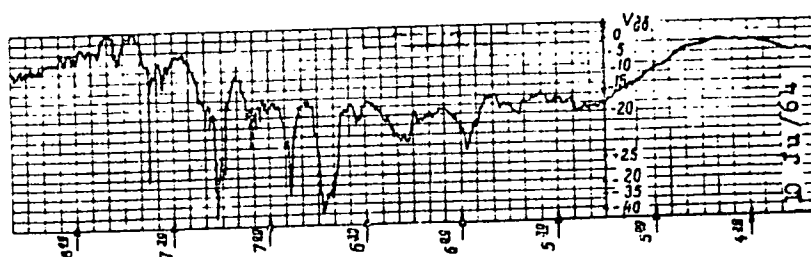


Fig. 3. Passive link signal

Card 4/5

1-2076-66
ACC. NO. AP6011662

0

Slow fades of the same type were also noted in the two active systems, although they tended to be somewhat offset in time from those of the passive system. A significant difference cited by the authors was that sharply pronounced fades, such as these caused by local tropospheric discontinuities, were rarely seen in the passive link but frequently occurred in the active ones. The explanation offered for this is that the glancing angle with the inversion layer was larger in the case of the passive link, which resulted in a smaller coefficient of refraction, hence, presumably less susceptibility to fade spikes. Some distribution functions of fade depths are presented for the passive link, covering a range from -22 to -32 db. These data show that the mean fade periods fell within the range of 8-30 sec. In order of magnitude, this was the same as for the two active links.

The authors conclude that a diffraction lens repeater can improve the attenuation characteristic well enough that it should be considered in some cases as a replacement for an active repeater station. They emphasize also that for equal intervals between stations, the stability of the passive system is as good as that of active systems. [FSB: v. 2, no. 7]

SUB CODE: 17 / SUBM DATE: 24Dec64 / ORIG REF: 002

Card 5/5

MADESHDENSKIY, Ye.L., gornyy inzhener

Blasting operations in quarries without a prior dismantling of tracks.
Gor.zhur. no.1:63 Ja '55. (MLRA 8:7)
(Blasting)